**3GPP TSG-SA5 Meeting #139-e *S5-215120***

**e-meeting, 11 - 20 October 2021**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **28.532** | **CR** | **0190** | **rev** | **1** | **Current version:** | **16.9.0**  |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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|  |
| ***Title:***  | Rel-16 CR TS 28.532 Fix the URI description for streaming data report MnS |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI16 |  | ***Date:*** | 2021-09-24 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Current URI description for streaming data report service to address the following aspects:1. Both term “root” and “MnSRoot” are used to represent same thing;
2. The term “version” is used, however, in other MnSs and TS 32.158, the term “MnSVersion” is used, which is not aligned;
3. The missing of "…" before location of Resourece, which is not align with corresponding content in other MnS (e.g. provisioning MnS)
 |
|  |  |
| ***Summary of change:*** | 1. Change “root” to “MnSRoot”
2. Change “version” to “MnSVersion”
3. add the "..." before location of Resource to align Reousce URI in other MnS.
 |
|  |  |
| ***Consequences if not approved:*** | The term related to URI used in streaming data report service is not aligned with other MnS and TS 32.158 |
|  |  |
| ***Clauses affected:*** | 12.5.1.3.1, 12.5.1.3.2.1.1,12.5.3.2.1.2,12.5.1.3.2.2, 12.5.1.3.2.2.2, 12.5.1.3.2.3, 12.5.1.3.2.3.2, 12.5.1.3.2.4, 12.5.1.3.2.4.2,A.6.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | Forge link: <https://forge.3gpp.org/rep/sa5/MnS/tree/28.532_Rel16_Fix_the_URI_description_for_streaming_data_report_MnS>  |
|  |  |
| ***This CR's revision history:*** |  |

|  |
| --- |
| **1st Change** |

#### 12.5.1.3 Resources

##### 12.5.1.3.1 Resources structure

Figure 12.5.1.3.1-1 shows the resource structure of the Streaming data reporting service.



Figure 12.5.1.3.1-1: Resource URI structure of the Streaming data reporting service

Table 12.5.1.3.1-1 provides an overview of the resources and applicable HTTP methods.

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method | Description |
| connections | …/connections | POST | Inform consumer about reporting streams to be carried by the new connection and receive a new connection id. |
| GET | Obtain information about connections |
| connection | …/connections/{connectionId} | GET (Upgrade) | Establish WebSocket for a given connection |
| GET | Obtain information about connection |
| WebSocket 0x2 | Send a unit of streaming data |
| WebSocket 0x8 | Terminate a WebSocket connection |
| streams | …/connections/{connectionId}/streams | POST | Inform consumer about new reporting streams on an existing connection. |
| DELETE | Remove reporting streams from an existing connection |
| GET | Obtain information about streams |
| stream | …/connections/{connectionId}/streams/{streamId} | GET | Obtain information about stream |

##### 12.5.1.3.2 Resources definitions

12.5.1.3.2.1 Resource "…/connections"

12.5.1.3.2.1.1 Description

This resource represents a collection of connections and can be used to establish new connections or to obtain information about existing connections.

12.5.1.3.2.1.2 URI

The resource URI is: {MnSRroot}/StreamingDataReportingMnS/{MnSVersion}/connections

This resource shall support the resource URI variables defined in the table 12.5.1.3.2.1.2-1.

Table 12.5.1.3.2.1.2-1: URI variables

|  |  |
| --- | --- |
| Name | Definition |
| MnSRoot | See clause 4.4.3 of TS 32.158 [15] |
| MnSVersion | See clause 4.4.3 of TS 32.158 [15] |

12.5.1.3.2.1.3 HTTP methods

12.5.1.3.2.1.3.1 HTTP POST

This method shall support the URI query parameters specified in the following table.

**Table 12.5.1.3.2.1.3.1-1: URI query parameters supported by the POST method on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| none supported |  |  |  |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

**Table 12.5.1.3.2.1.3.1-2: Data structures supported by the POST request body on this resource**

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| producerId | String representing the DN of the streaming data reporting MnS producer. | M |
| array(streamInfo-Type) | List of meta-data about each reporting stream. Where each reporting stream is represented by a streamInfo. |  |

**Table 12.5.1.3.2.1.3.1-3: Data structures supported by the POST Response Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |
| uri-Type | 201 Posted | Connection identifier assigned by the MnS consumer | M |

12.5.1.3.2.1.3.2 HTTP GET

This method shall support the URI query parameters specified in the following table.

**Table 12.5.1.3.2.1.3.2-1: URI query parameters supported by the GET method on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| connectionIdList | array(uri-Type) | The list of connectionId for which the connection information is to be returned. | O |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

**Table 12.5.1.3.2.1.3.2-2: Data structures supported by the GET request body on this resource**

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| n/a | n/a | n/a |

**Table 12.5.1.3.2.1.3.2-3: Data structures supported by the GET Response Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |
| array(uri-Type, streamReporter-Type, streamIdList-Type) | 200 OK | In case of success the representation of the retrieved information is returned. | M |
| 202 Partially retrieved | In case of partial success the representation of the retrieved information is returned. | M |

12.5.1.3.2.2 Resource "…/connections/{connectionId}"

12.5.1.3.2.2.1 Description

This resource represents an individual connection and can be used for an "upgrade" to WebSocket as part of the connection establishment, or to obtain information about an existing connection, or to terminate an existing connection, or to send a unit of streaming data.

12.5.1.3.2.2.2 URI

The resource URI is: {MnSRoot}/StreamingDataReportingMnS/{MnSVersion}/connections/{connectionId}

This resource shall support the resource URI variables defined in the table 12.5.1.3.2.2.2-1.

Table 12.5.1.3.2.2.2-1: URI variables

|  |  |
| --- | --- |
| Name | Definition |
| MnSRoot | See clause 4.4.3 of TS 32.158 [15] |
| MnSVersion | See clause 4.4.3 of TS 32.158 [15] |
| connectionId | Represents identifier of an individual connection assigned by the MnS consumer during connection establishment |

12.5.1.3.2.2.3 HTTP methods

12.5.1.3.2.2.3.1 HTTP GET (Upgrade)

This method shall support the URI header parameters specified in the following table.

**Table 12.5.1.3.2.2.3.2-1: Header parameters supported by the GET request on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| connectionId | uri-Type | To indicate the ID (URI) of the connection being upgraded to WebSocket | M |
| Upgrade | Upgrade-HeaderType | To indicate the HTTP GET operation is to upgrade the connection to WebSocket protocol | M |
| Connection | Connection-HeaderType | To indicate the HTTP GET operation is to upgrade the connection to another protocol | M |
| Sec-WebSocket-Key | Sec-WebSocket-Key-HeaderType | The Sec-WebSocket-Key needed for establishing the WebSocket connection. | M |
| Sec-WebSocket-Version | Sec-WebSocket-Version-HeaderType | The Sec-WebSocket-Version needed for establishing the WebSocket connection. | M |

This method shall support the URI query parameters specified in the following table.

**Table 12.5.1.3.2.2.3.2-2: URI query parameters supported by the GET method on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| none supported |  |  |  |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

**Table 12.5.1.3.2.2.3.2-3: Data structures supported by the GET request body on this resource**

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| n/a | n/a | n/a |

**Table 12.5.1.3.2.2.3.2-4: Header parameters supported by the GET response on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| Upgrade | Upgrade-HeaderType | To indicate the HTTP GET operation is to upgrade the connection to WebSocket protocol | M |
| Connection | Connection-HeaderType | To indicate the HTTP GET operation is to upgrade the connection to another protocol | M |
| Sec-WebSocket-Accept | Sec-WebSocket-Accept-HeaderType | The Sec-WebSocket-Accept responded when establishing the WebSocket connection. | M |

**Table 12.5.1.3.2.2.3.2-5: Data structures supported by the GET response body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response****codes** | **Description** | **S** |
| n/a | 101 Switching Protocols | The status code indicating the connection has been successfully upgraded to WebSocket. | M |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |

12.5.1.3.2.2.3.2 HTTP GET

This method shall support the URI query parameters specified in the following table.

**Table 12.5.1.3.2.1.3.2-1: URI query parameters supported by the GET method on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| none supported |  |  |  |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

**Table 12.5.1.3.2.1.3.2-2: Data structures supported by the GET request body on this resource**

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| n/a | n/a | n/a |

**Table 12.5.1.3.2.1.3.2-3: Data structures supported by the GET Response Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |
| uri-Type | 200 OK | In case of success the representation of the connectionId is returned. | M |
| streamReporter-Type | 200 OK | In case of success the representation of the streamReporter is returned. | M |
| streamIdList-Type | 200 OK | In case of success the representation of the streamIdList is returned. | M |

12.5.1.3.2.3 Resource "…/connections/{connectionId}/streams"

12.5.1.3.2.3.1 Description

This resource represents a collection of reporting streams on a particular connection and can be used to add a new reporting stream to an existing connection, or to remove a reporting stream from an existing connection, or to obtain information about reporting streams.

12.5.1.3.2.3.2 URI

The resource URI is: {MnSRoot}/StreamingDataReportingMnS/{MnSVersion}/connections/{connectionId}/streams

This resource shall support the resource URI variables defined in the table 12.5.1.3.2.3.2-1.

Table 12.5.1.3.2.3.2-1: URI variables

|  |  |
| --- | --- |
| Name | Definition |
| MnSRoot | See clause 4.4.3 of TS 32.158 [15] |
| MnSVersion | See clause 4.4.3 of TS 32.158 [15] |
| connectionId | See table 12.5.1.3.2.2.2-1 |

12.5.1.3.2.3.3 HTTP methods

12.5.1.3.2.3.3.1 HTTP POST

This method shall support the URI query parameters specified in the following table.

**Table 12.5.1.3.2.3.3.1-1: URI query parameters supported by the POST method on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| none supported |  |  |  |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

**Table 12.5.1.3.2.3.3.1-2: Data structures supported by the POST request body on this resource**

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| array(streamInfo-Type) | The resource representation of the set of information about streams to be posted. | M |

**Table 12.5.1.3.2.3.3.1-3: Data structures supported by the POST Response Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| array(streamInfo-Type) | 201 Posted | In case of success the representation of the posted information about streams is returned. | M |
| 202 Partially posted | In case of partial success the representation of the posted information about streams is returned. | M |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |

12.5.1.3.2.3.3.2 HTTP DELETE

This method shall support the URI query parameters specified in the following table.

Table 12.5.1.3.2.3.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| streamIdList | array(streamId-Type) | The list of streamId for the stream(s) to be deleted. | M |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

Table 12.5.1.3.2.3.3.2: Data structures supported by the DELETE request body on this resource

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| n/a | n/a | n/a |

Table 12.5.1.3.2.3.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| n/a | 204 No Content | In case of success no message body is returned | M |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |

12.5.1.3.2.3.3.3 HTTP GET

This method shall support the URI query parameters specified in the following table.

Table 12.5.1.3.2.3.3.3-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| streamIdList | array(streamId-Type) | The list of streamId for which the stream information are to be returned. | O |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

Table 12.5.1.3.2.3.3.3-2: Data structures supported by the GET request body on this resource

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| n/a | n/a | n/a |

Table 12.5.1.3.2.3.3.3-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| array(streamInfo-Type, streamReporters-Type) | 200 OK | In case of success the representation of the retrieved stream information is returned. | M |
| 202 Partially retrieved | In case of partial success the representation of the retrieved stream information is returned. | M |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |

12.5.1.3.2.4 Resource "…/connections/{connectionId}/streams/{streamId}"

12.5.1.3.2.4.1 Description

This resource represents an individual reporting stream on an existing connection and can be used to obtain information about reporting stream.

12.5.1.3.2.4.2 URI

The resource URI is: {MnSRoot}/StreamingDataReportingMnS/{MnSVersion}/connections/{connectionId}/streams/{streamId}

This resource shall support the resource URI variables defined in the table 12.5.1.3.2.4.2-1.

Table 12.5.1.3.2.4.2-1: URI variables

|  |  |
| --- | --- |
| Name | Definition |
| MnSRoot | See clause 4.4.3 of TS 32.158 [15] |
| MnSVersion | See clause 4.4.3 of TS 32.158 [15] |
| connectionId | See table 12.5.1.3.2.2.2-1 |
| streamId | Represents identifier of an individual stream. For Streaming Trace reporting, the Trace Reference (see clause 5.6 of 3GPP TS 32.422 [38]) is used as stream identifier |

12.5.1.3.2.4.3 HTTP methods

12.5.1.3.2.4.3.1 HTTP GET

This method shall support the URI query parameters specified in the following table.

**Table 12.5.1.3.2.4.3.1-1: URI query parameters supported by the GET method on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Data type** | **Description** | **S** |
| none supported |  |  |  |

This method shall support the request data structures, the response data structures and response codes specified in the following table.

**Table 12.5.1.3.2.4.3.1-2: Data structures supported by the GET request body on this resource**

|  |  |  |
| --- | --- | --- |
| **Data type** | **Description** | **S** |
| n/a | n/a | n/a |

**Table 12.5.1.3.2.4.3.1-3: Data structures supported by the GET Response Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Response codes** | **Description** | **S** |
| streamInfo-Type | 200 OK | In case of success the representation of the retrieved stream information is returned. | M |
| streamReporters-Type | 200 OK | In case of success the representation of the retrieved stream reporters information is returned. | M |
| error-ResponseType | 4xx/5xx | Returned in case of an error | M |

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| **2nd  Change** |

# A.6 Streaming data reporting management service

## A.6.1 Introduction

Clause A.6.2 contains the OpenAPI specification of the Streaming data reporting MnS.

## A.6.2 OpenAPI document "streamingDataMnS.yaml"

openapi: 3.0.1

info:

 title: TS 28.532 Streaming data reporting service

 version: 16.10.0

 description: OAS 3.0.1 specification for the Streaming data reporting service (Streaming MnS)

servers:

 - url: '{MnSRoot}/StreamingDataReportingMnS/{MnSVersion}'

 variables:

 MnSRoot:

 description: See clause 4.4.3 of TS 32.158.

 default: https://example.com/3GPPManagement

 MnSersion:

 description: See clause 4.4.3 of TS 32.158.

 default: ’’

paths:

 '/connections':

 post:

 summary: Inform consumer about reporting streams to be carried by the new connection and receive a new connection id.

 description: Exchange of meta-data (producer informs consumer about its own identity and the nature of the data to be reported via streaming) phase of the connection establishement by streaming data reporting producer to the streaming data reporting consumer (i.e. streaming target).

 requestBody:

 required: true

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/connectionRequest-Type'

 responses:

 '201':

 description: Success case (201 Created).

 headers:

 Location:

 description: Location of the created connection resource.

 schema:

 $ref: '#/components/schemas/connectionId-Type'

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/failedConnectionResponse-Type'

 get:

 summary: Obtain information about connections.

 description: Enables the streaming data reporting service producer to obtain information about one or more streaming connections.

 parameters:

 - name: connectionIdList

 in: query

 description: The list of connectionId for which the connection information is to be returned.

 required: false

 schema:

 type: array

 items:

 $ref: '#/components/schemas/connectionId-Type'

 responses:

 '200':

 description: Success case (200 OK). The resources identified in the request for retrieval are returned in the response message body. In case the fields query parameter is used, the selected resources are returned.

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/connectionInfo-Type'

 '202':

 description: Partial success case (202 Partially retrieved). Subset of the resources identified in the request for retrieval are returned in the response message body.

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/connectionInfo-Type'

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/errorResponse-Type'

 '/connections/{connectionId}':

 get:

 summary: Obtain information about a connection.

 description: Enables the streaming data reporting service producer to obtain information about one streaming connection.

 parameters:

 - name: connectionId

 in: path

 description: Indicate the ID (URI) of the connection for which the information is being retrieved

 required: true

 schema:

 $ref: '#/components/schemas/connectionId-Type'

 - name: Connection

 in: header

 schema:

 $ref: '#/components/schemas/websocketHeaderConnection-Type'

 - name: Sec-WebSocket-Extensions

 in: header

 schema:

 $ref: '#/components/schemas/websocketHeader-Sec-WebSocket-Extensions-Type'

 - name: Sec-WebSocket-Key

 in: header

 schema:

 $ref: '#/components/schemas/websocketHeader-Sec-WebSocket-Key-Type'

 - name: Sec-WebSocket-Protocol

 in: header

 schema:

 $ref: '#/components/schemas/websocketHeader-Sec-WebSocket-Protocol-Type'

 - name: Sec-WebSocket-Version

 in: header

 schema:

 $ref: '#/components/schemas/websocketHeader-Sec-WebSocket-Version-Type'

 responses:

 '101':

 description: Success case (101 Switching Protocols). The connection has been successfully switched to WebSocket. The response message body is absent.

 headers:

 Upgrade:

 schema:

 $ref: '#/components/schemas/websocketHeaderUpgrade-Type'

 Connection:

 schema:

 $ref: '#/components/schemas/websocketHeaderConnection-Type'

 Sec-WebSocket-Accept:

 schema:

 $ref: '#/components/schemas/websocketHeader-Sec-WebSocket-Accept-Type'

 '200':

 description: Success case (200 OK). The resource identified in the request for retrieval returned in the response message body.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/connectionInfo-Type'

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/errorResponse-Type'

 '/connections/{connectionId}/streams':

 post:

 summary: Inform consumer about new reporting streams on an existing connection.

 description: Allows the producer to add one or more reporting streams to an already established streaming connection.

 parameters:

 - name: connectionId

 in: path

 description: Indicate the ID (URI) of the connection for which the reporting stream information is being added.

 required: true

 schema:

 $ref: '#/components/schemas/connectionId-Type'

 requestBody:

 required: true

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamInfo-Type'

 responses:

 '201':

 description: Success case (201 Posted).

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamInfo-Type'

 '202':

 description: Partial success case (202 Posted).

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamInfo-Type'

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/errorResponse-Type'

 delete:

 summary: Remove reporting streams from an existing connection

 description: Allows the producer to remove one or more reporting streams from an already established streaming connection.

 parameters:

 - name: connectionId

 in: path

 description: Indicate the ID (URI) of the connection for which the reporting stream information is being removed.

 required: true

 schema:

 $ref: '#/components/schemas/connectionId-Type'

 - name: streamIds

 in: query

 description: The list of streamId for the stream(s) to be deleted.

 required: true

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamId-Type'

 responses:

 '204':

 description: Success case (204 No Content). The stream information resource has been deleted. The response message body is absent.

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/errorResponse-Type'

 get:

 summary: Obtain information about streams.

 description: Enables the streaming data reporting service producer to obtain information about one or more reporting streams.

 parameters:

 - name: connectionId

 in: path

 description: Indicate the ID (URI) of the connection for which the information is being retrieved

 required: true

 schema:

 $ref: '#/components/schemas/connectionId-Type'

 - name: streamIds

 in: query

 description: The list of streamId for which the stream information is to be retrieved.

 required: true

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamId-Type'

 responses:

 '200':

 description: Success case (200 OK).

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamInfoWithReporters-Type'

 '202':

 description: Partial success case (202 Partially retrieved).

 content:

 application/json:

 schema:

 type: array

 items:

 $ref: '#/components/schemas/streamInfoWithReporters-Type'

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/errorResponse-Type'

 '/connections/{connectionId}/streams/{streamId}':

 get:

 summary: Obtain information about stream

 description: Enables the streaming data reporting service producer to obtain information about a reporting stream.

 parameters:

 - name: connectionId

 in: path

 description: Indicate the ID (URI) of the connection for which the information is being retrieved

 required: true

 schema:

 $ref: '#/components/schemas/connectionId-Type'

 - name: streamId

 in: path

 description: Indicate the ID of the reporting stream for which the information is being retrieved

 required: true

 schema:

 $ref: '#/components/schemas/streamId-Type'

 responses:

 '200':

 description: Success case (200 OK).

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/streamInfoWithReporters-Type'

 default:

 description: Error case.

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/errorResponse-Type'

components:

 schemas:

 analyticsInfo-Type:

 description: Information specific to analytics reporting.

 type: object

 properties:

 activityDetails:

 type: string

 connectionId-Type:

 $ref: '#/components/schemas/uri-Type'

 connectionInfo-Type:

 type: object

 properties:

 connection:

 $ref: '#/components/schemas/connectionId-Type'

 producer:

 $ref: '#/components/schemas/producerId-Type'

 streams:

 type: array

 items:

 $ref: '#/components/schemas/streamId-Type'

 connectionRequest-Type:

 type: object

 properties:

 producer:

 $ref: '#/components/schemas/producerId-Type'

 streams:

 type: array

 items:

 $ref: '#/components/schemas/streamInfo-Type'

 errorResponse-Type:

 type: object

 properties:

 error:

 type: object

 properties:

 errorInfo:

 type: string

 failedConnectionResponse-Type:

 type: object

 properties:

 error:

 type: array

 items:

 type: object

 properties:

 streamId:

 $ref: '#/components/schemas/streamId-Type'

 errorReason:

 type: string

 measObjDn-Type:

 description: DN of the measured object instance (see 3GPP TS 28.550)

 allOf:

 - $ref: '#/components/schemas/systemDN-Type'

 performanceMetrics-Type:

 description: an ordered list of performance metric names (see clause 4.4.1 of 3GPP TS 28.622[11]) whose values are to be reported by the Performance Data Stream Units (see Annex C of TS 28.550 [42]) via this stream. Performance metrics include measurement and KPI

 type: array

 items:

 type: string

 performanceInfo-Type:

 description: Information specific to performance data reporting

 type: object

 properties:

 measObjDn:

 $ref: '#/components/schemas/measObjDn-Type'

 performanceMetrics:

 $ref: '#/components/schemas/performanceMetrics-Type'

 jobId:

 type: string

 required:

 - measObjDn

 - performanceMetrics

 producerId-Type:

 description: DN of the streaming data reporting MnS producer.

 allOf:

 - $ref: '#/components/schemas/systemDN-Type'

 serializationFormat-Type:

 type: string

 enum:

 - GPB

 - ASN1

 streamId-Type:

 description: globally unique stream identifier

 type: string

 example: '26F452550021'

 streamInfo-Type:

 description: Reporting stream meta-data.

 type: object

 properties:

 streamType:

 $ref: '#/components/schemas/streamType-Type'

 serializationFormat:

 $ref: '#/components/schemas/serializationFormat-Type'

 streamId:

 oneOf:

 - $ref: '#/components/schemas/streamId-Type'

 - $ref: '#/components/schemas/traceReference-Type'

 additionalInfo:

 oneOf:

 - $ref: '#/components/schemas/traceInfo-Type'

 - $ref: '#/components/schemas/performanceInfo-Type'

 - $ref: '#/components/schemas/analyticsInfo-Type'

 - $ref: '#/components/schemas/vsDataContainer-Type'

 required:

 - streamType

 - serializationFormat

 - streamId

 streamInfoWithReporters-Type:

 description: Reporting stream meta-data with added information about reporters.

 type: object

 properties:

 streamInfo:

 $ref: '#/components/schemas/streamInfo-Type'

 reporters:

 type: array

 items:

 $ref: '#/components/schemas/producerId-Type'

 systemDN-Type:

 description: See 3GPP TS 32.300 for details

 type: string

 example: 'SubNetwork=ABCNetwork,SubNetwork=MUC01,GNBDUFunction=XYZ0100'

 streamType-Type:

 type: string

 enum:

 - TRACE

 - PERFORMANCE

 - ANALYTICS

 - PROPRIETARY

 traceInfo-Type:

 description: Information specific to trace data reporting

 allOf:

 - $ref: 'genericNrm.yaml#/components/schemas/TraceJob-Attr'

 traceReference-Type:

 description: Trace Reference (see clause 5.6 of 3GPP TS 32.422) as stream identifier for streaming trace data reporting

 type: string

 example: '4358070034D7'

 uri-Type:

 description: Resource URI

 type: string

 vsDataContainer-Type:

 description: container for vendor specific data (see 3GPP TS 28.622)

 type: object

 properties:

 vsDataType:

 type: string

 vsData:

 type: string

 vsDataFormatVersion:

 type: string

 websocketHeaderConnection-Type:

 description: Header value for the upgrade request and response.

 type: string

 enum:

 - Upgrade

 websocketHeaderUpgrade-Type:

 description: Header value for the upgrade to WebSocket request and response.

 type: string

 enum:

 - websocket

 websocketHeader-Sec-WebSocket-Accept-Type:

 description: Header value for secure WebSocket response. Carries hash.

 type: string

 websocketHeader-Sec-WebSocket-Extensions-Type:

 description: Header value for secure WebSocket request. Carries protocol extensions.

 type: string

 websocketHeader-Sec-WebSocket-Key-Type:

 description: Header value for secure WebSocket request. Provides information to the server which is needed in order to confirm that the client is entitled to request an upgrade to WebSocket.

 type: string

 websocketHeader-Sec-WebSocket-Protocol-Type:

 description: Header value for secure WebSocket request. Carries a comma-separated list of subprotocol names, in the order of preference.

 type: string

 websocketHeader-Sec-WebSocket-Version-Type:

 description: Header value for secure WebSocket request and response. Carries the WebSocket protocol version to be used.

 type: string

|  |
| --- |
| **End of Change** |